

Attached herewith is a marked up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with marks to show changes made".

Following the Interview held with the Examiner, Applicant has chosen to amend the "cells in suspension" claims (new claims 71-72) to recite that the enzyme is heparanase and that it is added so as to increase the natural amount of heparanase externally adhered to the cells; and further to restrict the "tissue" claim to embryos.

Continued Examination Under 37 CFR 1.114

As was discussed with the Examiner, under the circumstances in this case, the request for continued examination was proper.

35 USC § 112, Second Paragraph Rejections

The Examiner has rejected claims 54-57 and 59 under 35 USC § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner's rejections are respectfully traversed. Claims 54-57 and 59 have now been canceled, thereby rendering moot the Examiner's rejections with respect thereto. New claims 71-73 have now been added.

New claims 71-73 avoid the rejections raised by the Examiner by reciting "purified mammalian heparanase", which reads on both purified recombinant and purified natural heparanases.

35 USC § 112, First Paragraph Rejections

The Examiner has rejected claims 54-57 and 59 under 35 USC § 112, first paragraph for lack of enablement. The Examiner's rejections are respectfully

traversed. Claims 54-57 and 59 have now been canceled, thereby rendering moot the Examiner's rejections with respect thereto. New claims 71-73 have now been added.

New claims 71-73 avoid the rejections raised by the Examiner by reciting "purified mammalian heparanase", which reads on both purified recombinant and purified natural heparanases.

35 U.S.C. § 102(b) Rejections - Bartlett et al.

The Examiner has rejected claims 54 and 56 under 35 U.S.C. § 102(b) as being anticipated by Bartlett et al. The Examiner's rejections are respectfully traversed. Claims 54 and 56 have now been canceled, thereby rendering moot the Examiner's rejections with respect thereto. New claims 71-72 have now been added.

The Examiner states that Bartlett et al. teach that certain cells are capable of degrading the subendothelial basement membrane. Bartlett et al. also teach that the cells naturally harbor externally adhered heparanase.

Bartlett et al., however fail to teach externally added heparanase, so as to increase the amount of heparanase adhered to the cells over the natural amount of heparanase adhered thereto.

Hence, Bartlett et al. fails to anticipate claims 71-72.

In addition, Bartlett et al., also fail to teach that (i) heparanase is responsible for the capability of degrading the subendothelial basement membrane, as other enzymes may participate in the degradation process; and (ii) even if so, Bartlett et al. fail to teach whether heparanase is a rate limiting factor in degrading the subendothelial basement membrane.

Applicant has demonstrated that by the external addition of purified heparanase to cells, so as to increase the amount of heparanase adhered thereto

over the natural amount, results in improved extravasation, implantation, transplantation, invasion and/or migration of the cells in vivo.

As such, Applicant has proven that (i) heparanase is indeed responsible for the capability of degrading the subendothelial basement membrane; and (ii) heparanase is indeed a rate limiting factor in degrading the subendothelial basement membrane.

Without undue experimentation, one ordinarily skilled in the art, based on the teachings of Bartlett et al., would not have been able to determine, with reasonable expectation to be correct, that (i) heparanase is indeed responsible for the capability of degrading the subendothelial basement membrane; and (ii) heparanase is indeed a rate limiting factor in degrading the subendothelial basement membrane.

Hence, it is also the Applicant's opinion that Bartlett et al. fail to render claims 71-72 obvious.

Hence, Applicant strongly believes that claims 71-72 are allowable.

35 U.S.C. § 103(a) Rejections - Fuks et al., Wang et al. and Myers et al.

The Examiner has rejected claims 57 and 59 under 35 U.S.C. § 103(a) as being unpatentable over Fuks et al., Wang et al. and Myers et al. The Examiner's rejections are respectfully traversed. Claims 57 and 59 have now been canceled, thereby rendering moot the Examiner's rejections with respect thereto. New claim 73 has now been added.

Claim 73 is limited to an embryo, hence is not rendered obvious by the combined references, because, these references do not teach embryo implantation.

Hence, it is the Applicant's opinion that claim 73 is patentable over the combined references and is hence allowable.

Following the filing date of the instant application, applicant has conducted experiments related to embryo implantation and has shown that externally adding purified mammalian heparanase to embryos results in increased implantation rates.

It is clear that the same argument recited above with respect to cells, applies also herein, wherein it is to be determined, with undue experimentation, that heparanase is indeed responsible to embryo implantation and that if so, whether it is a success limiting step.

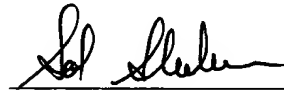
Support

The specification provides ample support for the amendments made to the claims. For example, the specification, defines the term "externally adhered"

As used herein in the specification and in the claims section below, the term "externally adhered" refers to associated with, e.g., presented. When applies to cells (or tissues) it refers to associated with the extracellular matrix. It will be appreciated that some cells/tissues have inherent extracellular matrix degrading enzyme(s) adhered thereto. The present invention, however, is directed at adding additional adhered enzyme thereto by man intervention.

In view of the above amendments and remarks it is respectfully submitted that claims 71-73 are now in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Sol Sheinbein", written over a horizontal line.

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